ABSTRACT OF THE DISCLOSURE

The present invention relates to a method for curing a defect in the fabrication of a composite gas separation module and to composite gas separation modules formed by a process that includes the method. The present invention also relates to a method for selectively separating hydrogen gas from a hydrogen gas-containing gaseous stream.

The method for curing a defect in the fabrication of a composite gas separation module includes depositing a first material over a porous substrate, thereby forming a coated substrate, wherein the coated substrate contains at least one defect. Then, the coated substrate can be selectively surface activated proximate to the defect, thereby forming at least one selectively surface activated region of the coated substrate. A second material can be then preferentially deposited on the selectively surface activated region of the coated substrate, whereby the defect is cured.